PIT TAG SYSTEM TRANSITION FORMERLY KNOWN AS ESSENTIAL M&E INFRASTRUCTURE - PIT TAG MONITOR PROCUREMENT 9701000

SHORT DESCRIPTION:
Formerly, Project # 83-319-01; project # was changed to avoid confusion with NMFS' Project #83-319-00. Replace existing 400 kHz PIT tag interrogation system on the mainstem Columbia/Snake rivers with new 134.2 kHz system; includes stationary monitors, hand-held readers and new ISO PIT tags.

SPONSOR/CONTRACTOR: BPA
Bonneville Power Administration
John H. Rowan, COTR
John H. Rowan - EWI Bonneville Power Administration PO Box 3621, Portland, OR 97208
503-230-4238 jhrowan@bpa.gov

SUB-CONTRACTORS:
PSMFC; U.S. Army Corps of Engineers; NMFS; others as needed

GOALS

GENERAL:
Adaptive management (research or M&E)

ANADROMOUS FISH:
Research, M&E

NPPC PROGRAM MEASURE:
N/A

RELATION TO MEASURE:
N/A

BIOLOGICAL OPINION ID:
N/A

OTHER PLANNING DOCUMENTS:
N/A

TARGET STOCK	LIFE STAGE	MGMT CODE (see below)
All chinook and steelhead species currently being PIT tagged	Juvenile	

BACKGROUND

HISTORY:
Little historical information since the Transition project was initiated about a year ago with the start of a procurement process to select vendor(s) that could produce 134.2 kHz stationary monitors that would replace existing 400 kHz monitors.

BIOLOGICAL RESULTS ACHIEVED:
N/A

PROJECT REPORTS AND PAPERS:
N/A

ADAPTIVE MANAGEMENT IMPLICATIONS:
The Transition project is intended to enhance the quality of data collected about the various life stages of anadromous fish. Better data should help the region make better decisions about what needs to occur to help rebuild anadromous fish populations in the Basin.

PURPOSE AND METHODS

SPECIFIC MEASUREABLE OBJECTIVES:
The Transition Project should result in the replacement of all 400 kHz monitors on the mainstem Columbia/Snake rivers with 134.2 kHz monitors in time for the 1999 spring outmigration

CRITICAL UNCERTAINTIES:
Natural river drawdown of the Lower Snake River projects would not allow for operation of the juvenile fish collection facilities; therefore, making any new PIT tag monitoring equipment useless at those sites. Similarly, spillway crest or natural river drawdown of the John Day reservoir would have the same impact on PIT tag monitoring facilities.

BIOLOGICAL NEED:
N/A

HYPOTHESIS TO BE TESTED:
N/A

ALTERNATIVE APPROACHES:
N/A

JUSTIFICATION FOR PLANNING:
N/A

METHODS:
Between about February 1, 1998 and March 31, 1999, all existing 400 kHz monitors on the mainstem Columbia and Snake rivers will be replaced with 134.2 kHz monitors. In most cases, this will be a matter of rewrapping the existing flumes and pipes and installing new electronics packages within the existing shield boxes. In some cases, flume and or pipe will have to be cut where the existing shield cannot be used or where a new monitor location is desired. The replacement of existing monitors during 1998 will have to be coordinated with numerous entities to ensure that sufficient 400 kHz detection capability remains throughout the 1998 juvenile migration.

PLANNED ACTIVITIES

SCHEDULE:

Planning Phase **Start** 1/16/97 **End** 1/17/97 **Subcontractor**

Task Establish Transition Team with four sub-Teams to handle infrastructure work at the dams, portable reader procurement, ISO tag development and procurement, and the field test of stationary monitors.

Implementation Phase **Start** 2/3/97 **End** 3/31/99 **Subcontractor** Various

Task Perform field test of stationary monitors; procure and install new monitors throughout the Basin; procure and distribute hand-held readers; and, procure and distribute new ISO PIT tags.

PROJECT COMPLETION DATE:
N/A

CONSTRAINTS OR FACTORS THAT MAY CAUSE SCHEDULE OR BUDGET CHANGES:
Budget reductions or re-allocations could deprive this project of needed funds; inability of manufacturers to produce necessary equipment including stationary monitors, portable monitors and ISO tags would certainly delay project implementation.

OUTCOMES, MONITORING AND EVALUATION

SUMMARY OF EXPECTED OUTCOMES

Expected performance of target population or quality change in land area affected:
N/A

Present utilization and convservation potential of target population or area:
N/A

Assumed historic status of utilization and conservation potential:
N/A

Long term expected utilization and conservation potential for target population or habitat:
N/A

Contribution toward long-term goal:
Data collected through the new and improved PIT tag interrogation system should help decisionmakers ascertain which system improvements are more likely than others to help rebuild anadromous fish populations in the Basin.

Indirect biological or environmental changes:
N/A

Physical products:
A full complement of stationary monitors, hand held readers and ISO PIT tags for use by anadromous fish managers in the Basin.

Environmental attributes affected by the project:
N/A

Changes assumed or expected for affected environmental attributes:
N/A

Measure of attribute changes:
N/A

Assessment of effects on project outcomes of critical uncertainty:
N/A

Information products:
Transition to the new PIT tag interrogation frequency itself will not produce new information; however, assuming successful transition, the use of the new system should provide better information regarding the migration and survival of anadromous fish through the Columbia River system.

Coordination outcomes:
N/A

MONITORING APPROACH
N/A

Provisions to monitor population status or habitat quality:
N/A

Data analysis and evaluation:
Currently, PIT tag data is provided over the Internet through PSMFC; this data can be used real time in the TMT in-season management process or by any other entity desiring to use it.

Information feed back to management decisions:
N/A

Critical uncertainties affecting project's outcomes:
N/A

EVALUATION
The project will be successful if 134.2 kHz monitors are in place at all appropriate locations at mainstem Columbia and Snake river projects in time for the 1999 juvenile outmigration.

Incorporating new information regarding uncertainties:
PIT tag technology has been improving pretty consistently over the past few years; however, it is possible that a different fish marking technology could come along to replace PIT tags.

Increasing public awareness of F&W activities:
Information provided by research projects employing the use of the new PIT tag technology should shed light on the contribution that each stage of the anadromous fish life-cycle has on survival from juvenile to spawning adult.

RELATIONSHIPS

RELATED BPA PROJECT	RELATIONSHIP
	Many other research projects that use PIT tags
9008000 Columbia Basin Pit-tag Information System	project develops software associated with PIT tag detection equipment and operates and maintains detection equipment at PIT tag monitoring sites
8331900 New Marking and Monitoring Techniques for Fish	project provides research data on new methods of tagging anadromous fish

OPPORTUNITIES FOR COOPERATION:
Currently, BPA, the Corps, NMFS, PSMFC, FPC, states and Tribes and Chelan County PUD are cooperating in the transition to the new interrogation system.

COSTS AND FTE

1997 Planned: $0
1997 Planned: $0

FUTURE FUNDING NEEDS:

PAST OBLIGATIONS (incl. 1997 if done):

FY	$ NEED	% PLAN	% IMPLEMENT	% O AND M
1998	$3,000,000			
1999	$1,300,000			
2000	$700,000			
2001	$500,000			

FY	OBLIGATED
1997	$140,975
TOTAL:	$140,975

Note: Data are past obligations, or amounts committed by year, not amounts billed. Does not include data for related projects.

OTHER NON-FINANCIAL SUPPORTERS:
N/A

LONGER TERM COSTS: $250,000
Continued Implementation

1997 OVERHEAD PERCENT: Different % depending on contractor

CONTRACTOR FTE: Depends on the contractor; since this project is just starting, no good estimation yet.

SUBCONTRACTOR FTE: Depends on the subcontractor; since this project is just starting, no good estimation yet.